

Application No. 10/565,802  
Amendment dated February 14, 2006  
Reply to Office Action of November 22, 2005

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**CLAIMS:**

Please amend claims 1, 6, 8, 12-14, 16, 21, 29, 35, 37, 43, and 44, and cancel claims 5, 11, 22, 34, and 42 without prejudice or disclaimer, as follows:

1. (Currently Amended) A method, comprising:  
calculating a course between two or more waypoints;  
analyzing cartographic data for the course for user identified criteria to avoid; and  
providing an alert signal when the course contains user identified criteria;  
determining a present location on the course based on a signal from a global positioning system (GPS); and  
analyzing cartographic data for a predetermined area around the present location for user identified criteria to avoid, wherein the predetermined area has a shape based on a heading.
2. (Original) The method of claim 1, wherein calculating the course includes calculating the course to avoid the user identified criteria between the two or more waypoints.

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3. (Original) The method of claim 2, wherein calculating the course includes identifying one or more non-user waypoints on the course.

4. (Original) The method of claim 1, wherein calculating the course include re-calculating the course to avoid the user identified criteria between the two or more waypoints when one or more user identified criteria are identified between the two or more waypoints.

5. (Canceled)

6. (Currently Amended) The method of claim [5] 1, further including providing an alert signal when the analyzed cartographic data for the predetermined area around the present location includes user identified criteria.

7. (Original) The method of claim 1, further including receiving user identified criteria selected from the group of a predetermined grade, a swamp, a lake, a river, a gorge, a cliff, ice, composition of path surface, non-wheelchair accessible, ranking value, and a terrain difficulty level.

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8. (Currently Amended) A method for calculating a course, comprising:  
analyzing cartographic data between two or more waypoints for user identified criteria to avoid; and  
performing a route calculation algorithm to calculate a course that includes the two or more waypoints with a preference to avoid user identified criteria;  
determining a present location on the course based on a signal from a global positioning system (GPS); and  
analyzing cartographic data for a predetermined area around the present location for user identified criteria to avoid, wherein a shape of the predetermined area is based on a heading.
9. (Original) The method of claim 8, wherein performing the route calculation algorithm includes re-calculating the course to avoid the user identified criteria between the two or more waypoints in response to a user input.
10. (Original) The method of claim 8, wherein the course calculated by the route calculation algorithm further includes identifying one or more non-user waypoints on the course.
11. (Canceled)

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12. (Currently Amended) The method of claim [[11]] 8, further including providing an alert signal when the analyzed cartographic data for the predetermined area around the present location includes user identified criteria.

13. (Currently Amended) The method of claim [[11]] 8, further including receiving user identified criteria selected from the group of a predetermined grade, a swamp, a lake, a river, a gorge, a cliff, ice, composition of path surface, non-wheelchair accessible, ranking value, and a terrain difficulty level.

14. (Currently Amended) A method, comprising:  
determining a present location based on a signal from a global positioning system  
(GPS); and  
analyzing cartographic data for a predetermined area around the present location  
for user identified criteria to avoid, wherein a shape of the predetermined  
area is based on a heading.

15. (Original) The method of claim 14, further including providing an alert signal when the analyzed cartographic data for the predetermined area around the present location includes user identified criteria.

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16. (Currently Amended) The method of claim 14, wherein the predetermined area includes radii extending along [[a]] the heading from the present location.

17. (Original) The method of claim 16, wherein the radii includes an angle formed from line segments emanating from the present location.

18. (Original) The method of claim 17, wherein the angle includes selectable values of greater than 0° degrees to 360° degrees.

19. (Original) The method of claim 16, wherein the radii extend a predetermined distance along the heading from the present location.

20. (Original) The method of claim 14, further including receiving user identified criteria selected from the group of a predetermined grade, a swamp, a lake, a river, a gorge, a cliff, ice, composition of path surface, non-wheelchair accessible, ranking value, and a terrain difficulty level.

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21. (Currently Amended) A method, comprising:
- determining a heading, wherein determining the heading includes determining the heading from an electronic compass signal;
- analyzing the heading for user identified criteria to avoid; and
- providing an alert signal when the heading contains user identified criteria.
22. (Canceled)
23. (Original) The method of claim 21, further including determining one or more positions using a global positioning system (GPS) signal, and recording a track log based on the one or more positions, wherein determining the heading includes determining the heading based on the track log.
24. (Original) The method of claim 21, further including performing a route calculation algorithm to calculate a route to avoid the user identified criteria.
25. (Original) The method of claim 24, further including displaying the route to avoid the user identified criteria.

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26. (Original) The method of claim 21, further including;
- determining a present location on the course based on a signal from a global positioning system (GPS); and
- analyzing cartographic data for a predetermined area around the present location for user identified criteria to avoid.
27. (Original) The method of claim 26, further including providing an alert signal when the analyzed cartographic data for the predetermined area around the present location includes user identified criteria.
28. (Original) The method of claim 21, further including receiving user identified criteria selected from the group consisting of a predetermined grade, a swamp, a lake, a river, a gorge, a cliff, ice, composition of path surface, non-wheelchair accessible, ranking value, and a terrain difficulty level.

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29. (Currently Amended) A computer readable medium having a set of computer readable instructions for causing a device to perform a method that comprises:

calculating a course between two or more waypoints;

analyzing cartographic data for the course for user identified criteria to avoid; and

providing an alert signal when the course contains user identified criteria;

determining a present location on the course based on a signal from a global positioning system (GPS); and

analyzing cartographic data for a predetermined area around the present location for user identified criteria to avoid, wherein a size of the predetermined area is based on a speed.

30. (Original) The computer readable medium of claim 29, wherein calculating the course includes performing a route calculation algorithm to calculate the course between the two or more waypoints with a preference for avoiding user identified criteria.

31. (Original) The computer readable medium of claim 30, wherein performing the route calculation algorithm includes calculating the course that avoids user identified criteria between the two or more waypoints.



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32. (Original) The computer readable medium of claim 30, wherein the method further includes re-calculating the course to avoid the user identified criteria between the two or more waypoints when the route calculation algorithm identifies one or more user identified criteria between the two or more waypoints.

33. (Original) The computer readable medium of claim 29, wherein calculating the course includes identifying one or more non-user waypoints on the course.

34. (Canceled)

35. (Currently Amended) The computer readable medium of claim ~~[[34]]~~ 29, further including providing an alert signal when the analyzed cartographic data for the predetermined area around the present location includes user identified criteria.

36. (Original) The computer readable medium of claim 29, further including receiving user identified criteria selected from the group consisting of a predetermined grade, a swamp, a lake, a river, a gorge, a cliff, ice, composition of path surface, non-wheelchair accessible, ranking value, and a terrain difficulty level.

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37. (Currently Amended) A navigation device, comprising:
- a processor;
  - an input operatively coupled to the processor, wherein the input receives two or more waypoints; and
  - a memory operatively coupled to the processor and the input, the memory having cartographic data including user identified criteria, wherein the processor operates on a route calculation algorithm to calculate a course between the two or more waypoints based on the user identified criteria of the cartographic data; and
  - a transceiver operably coupled to the processor to wirelessly transmit and receive voice data signals with an electronic device.
38. (Original) The navigation device of claim 37, wherein the processor operates on the route calculation algorithm to analyze cartographic data for the course to identify and avoid user identified criteria in the course between the two or more waypoints.
39. (Original) The navigation device of claim 37, wherein the processor operates on the route calculation algorithm to generate a signal for an alert signal when the course contains user identified criteria.

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40. (Original) The navigation device of claim 37, wherein the processor operates on the route calculation algorithm to avoid the user identified criteria by re-calculating the course to avoid the user identified criteria between the two or more waypoints when the route calculation algorithm identifies one or more user identified criteria between the two or more waypoints.

41. (Original) The navigation device of claim 37, wherein the processor operates on the route calculation algorithm to identify one or more non-user waypoints between the two or more waypoints.

42. (Canceled)

43. (Currently Amended) The navigation device of claim ~~[[42]]~~ 37, wherein the transceiver is operable to transmit and to receive voice data signals on a Family Radio Service (FRS) frequency.

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44. (Currently Amended) A navigation device, comprising:

a processor;

a receiver for a global positioning system (GPS) operatively coupled to the processor; and

a memory operatively coupled to the processor, the memory having cartographic data including user identified criteria, wherein the processor determines a present location value based on a signal received from the GPS, and analyzes cartographic data for a predetermined area around the present location value for user identified criteria to avoid, wherein a size and shape of the predetermined area is based on a speed and heading.

45. (Original) The navigation device of claim 44, wherein the processor provides an alert signal when the analyzed cartographic data for the predetermined area around the present location value includes user identified criteria.

46. (Original) The navigation device of claim 44, wherein the processor operates on a track log algorithm to record a track log based on a series of the present location value, and operates on a heading algorithm to determine a heading based on the track log, wherein the processor further operates on an analysis algorithm to analyzes cartographic data of the heading for the user identified criteria, and wherein the processor generates a signal for an alert signal when the heading contains user identified criteria.